

Supplemental Material for: Spatio-temporal epidemiology of Japanese encephalitis virus infection in pig populations of eastern Uttar Pradesh, India, 2013-2022

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July 25, 2023

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Supplementary Material

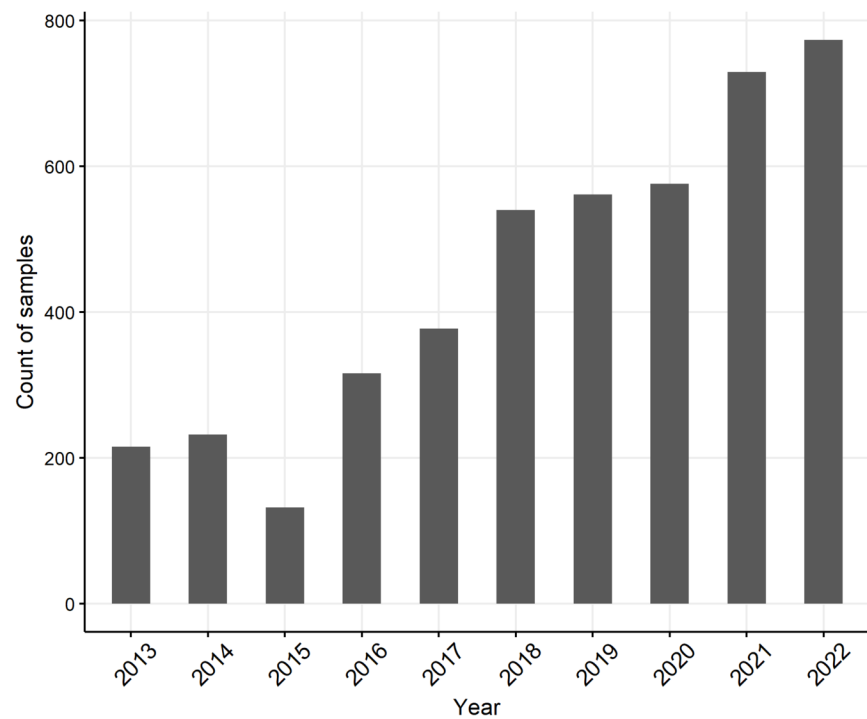


Figure S1 Annual count of blood samples from pigs in eastern Uttar Pradesh, tested for Japanese encephalitis antibodies by the Indian Veterinary Research Institute, February 2013 – December 2022.

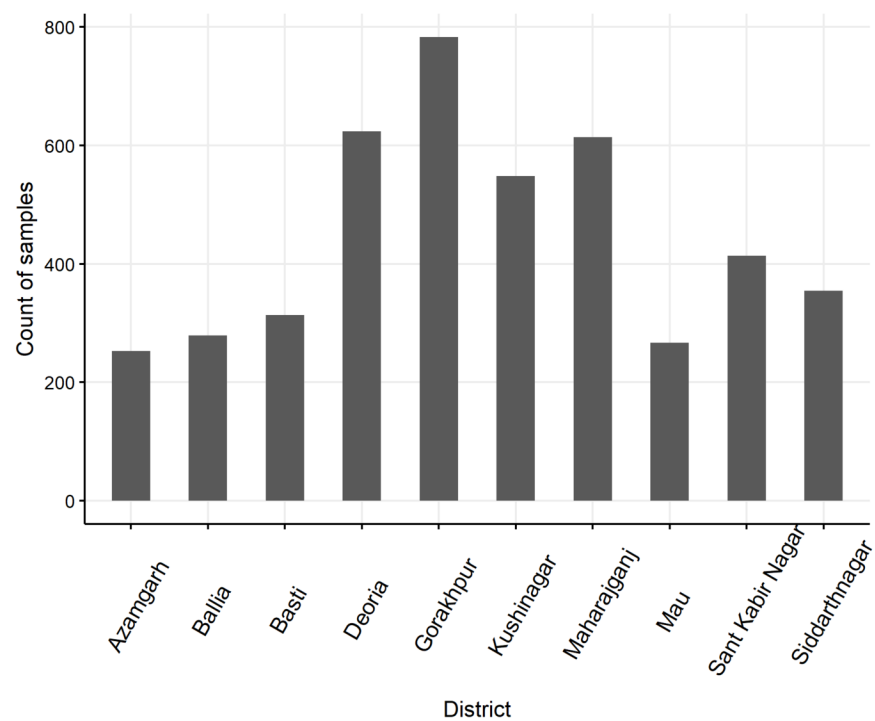


Figure S2 Total count of blood samples from pigs in eastern Uttar Pradesh by district, tested for Japanese encephalitis antibodies by the Indian Veterinary Research Institute, February 2013 – December 2022.

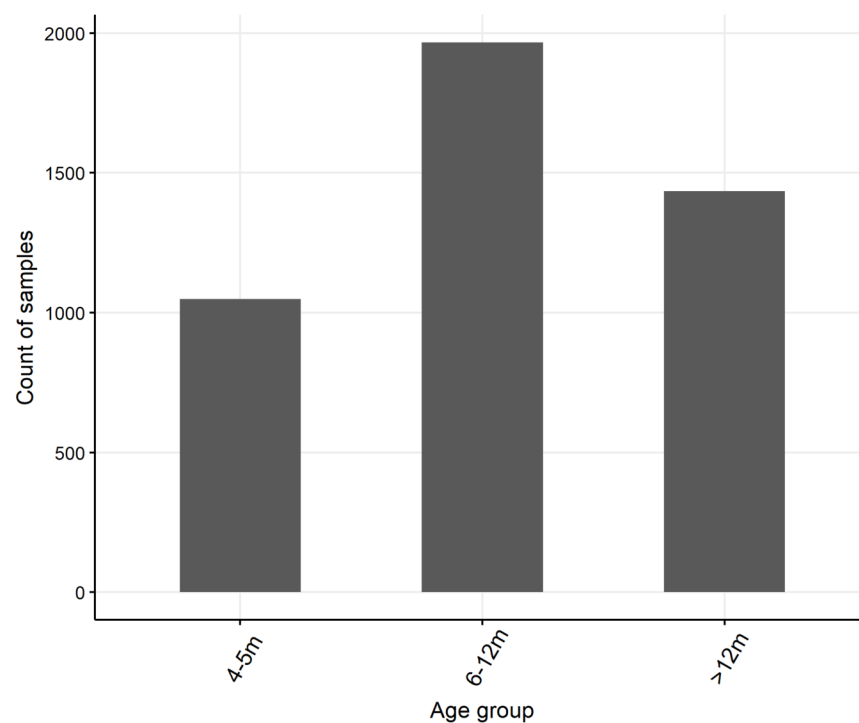


Figure S3 Total count of blood samples from pigs in eastern Uttar Pradesh by age group, tested for Japanese encephalitis antibodies by the Indian Veterinary Research Institute, February 2013 – December 2022.

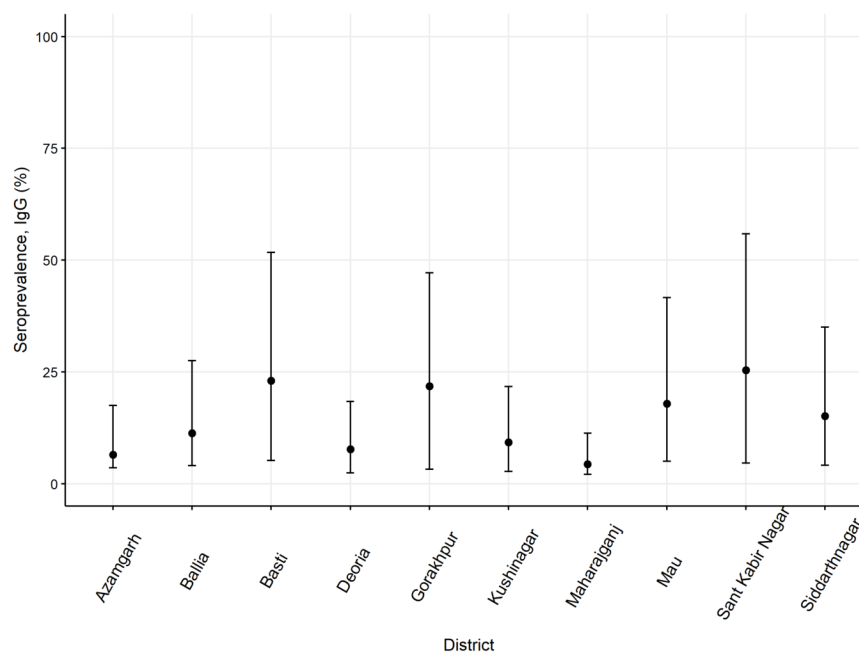


Figure S4 Seroprevalence of IgG for Japanese encephalitis virus in pigs in eastern Uttar Pradesh by district, February 2013 – December 2022. Bars indicate 95% confidence intervals.

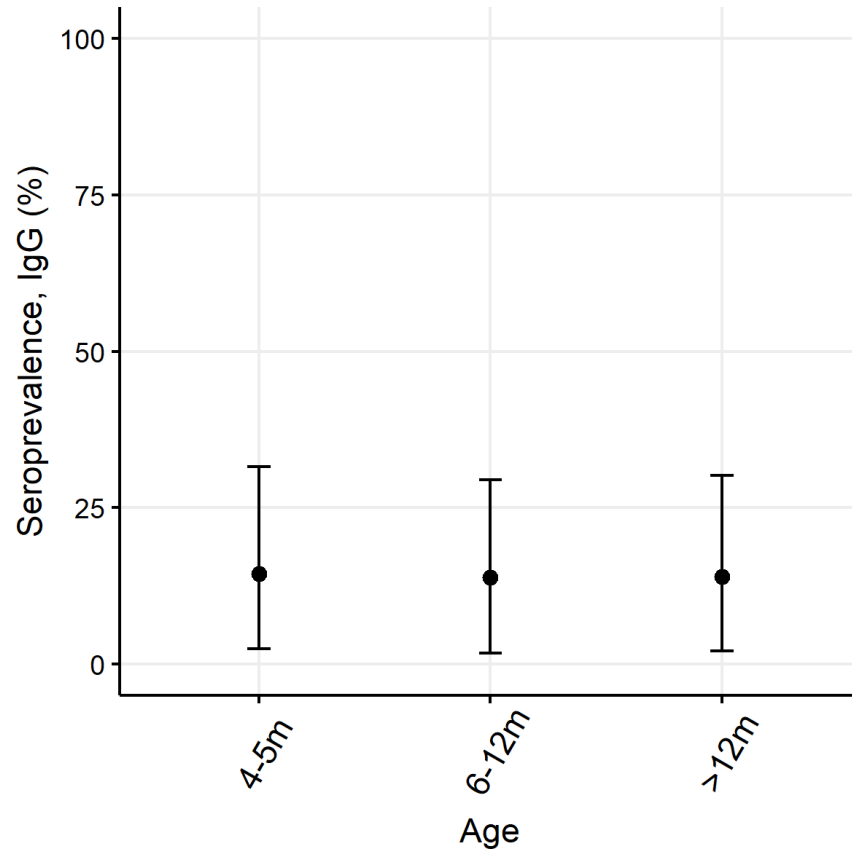


Figure S5 Seroprevalence of IgG for Japanese encephalitis virus in pigs in eastern Uttar Pradesh by age group, February 2013 – December 2022. Bars indicate 95% confidence intervals.

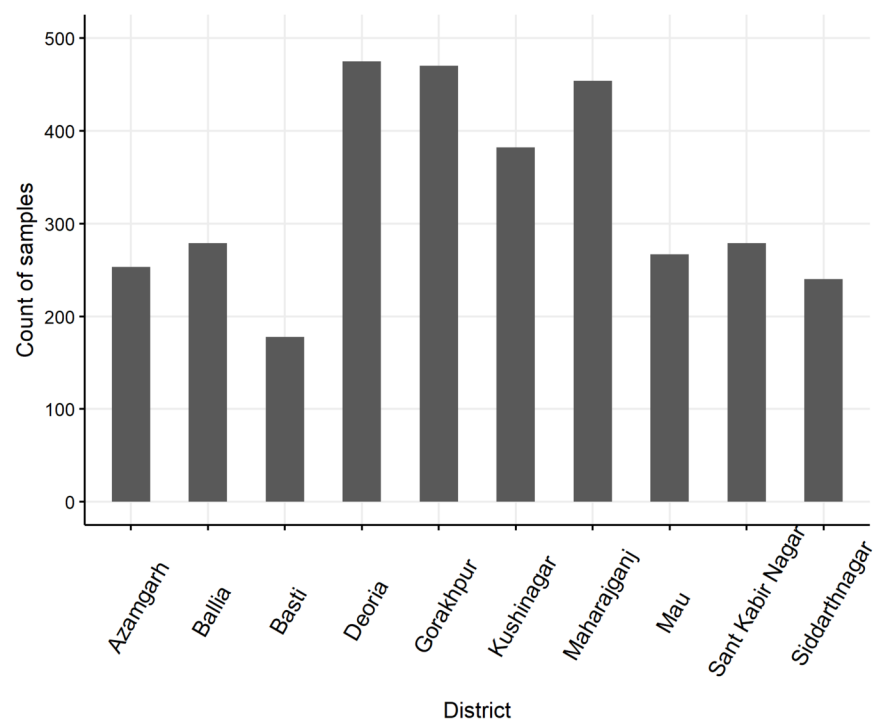


Figure S6 Count of blood samples from pigs in eastern Uttar Pradesh by district, tested for Japanese encephalitis virus IgM by the Indian Veterinary Research Institute, October 2017 – December 2022.

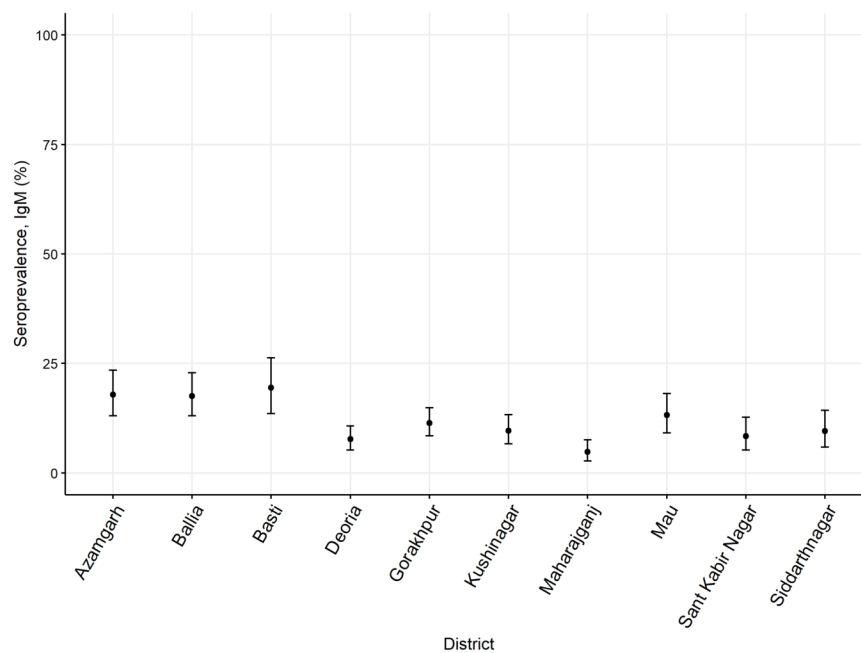


Figure S7 Seroprevalence of IgM for Japanese encephalitis virus in pigs in eastern Uttar Pradesh by district, October 2017 – December 2022. Bars indicate 95% confidence intervals.

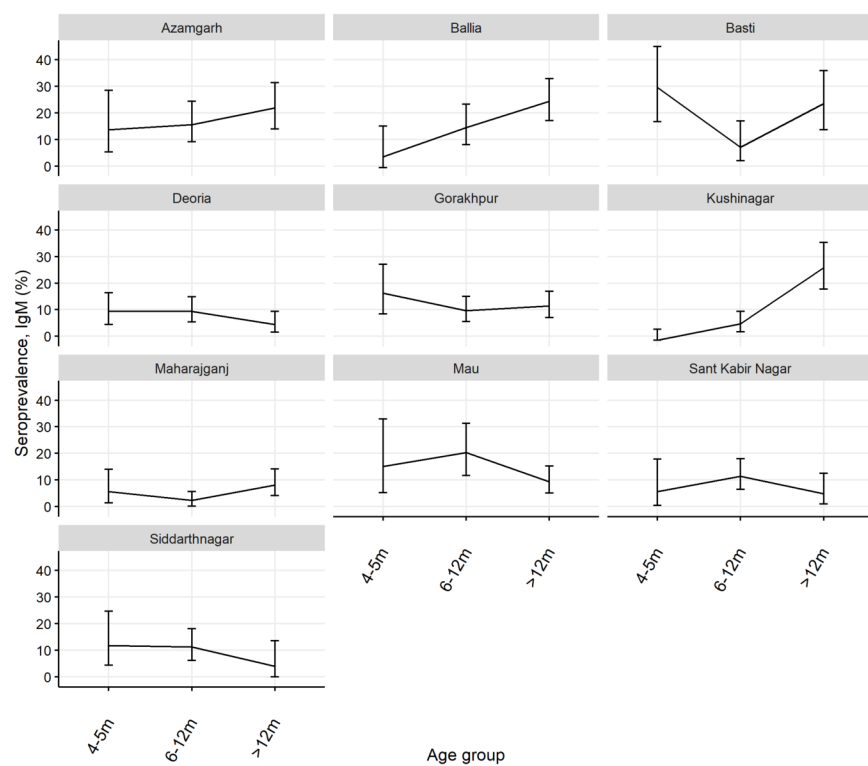


Figure S8 Seroprevalence of IgM for Japanese encephalitis virus in pigs in eastern Uttar Pradesh by age group, October 2017 – December 2022. Bars indicate 95% confidence intervals.

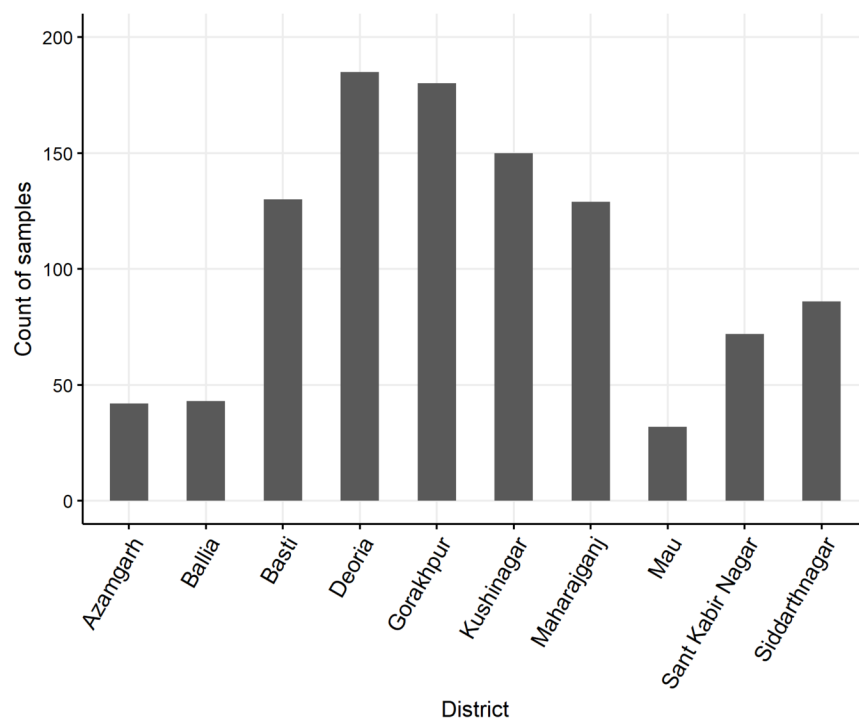


Figure S9 Count of samples tested for IgG for Japanese encephalitis virus in pigs aged 4-5m in eastern Uttar Pradesh, October 2013 – December 2022.

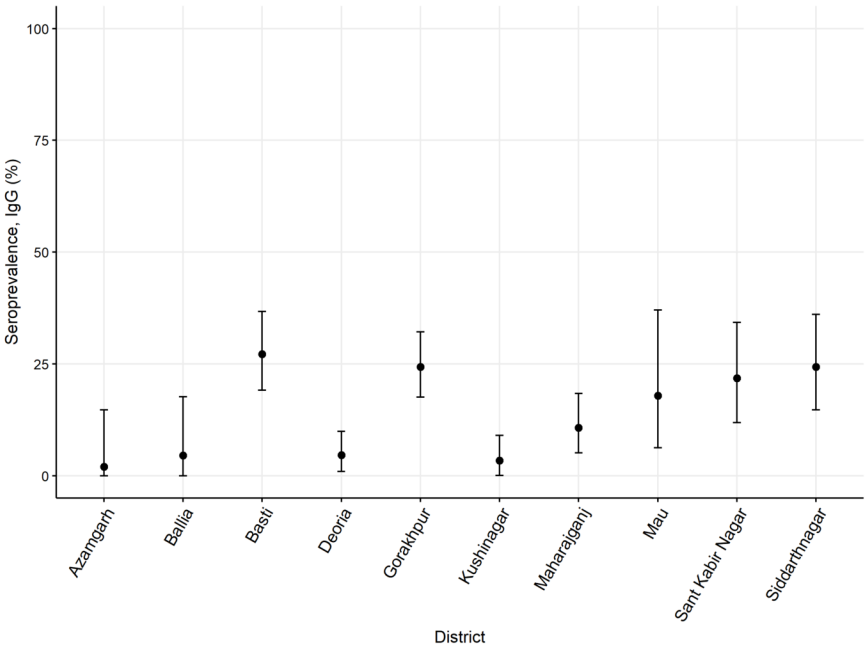


Figure S10 Seroprevalence of IgG for Japanese encephalitis virus in pigs aged 4-5 months in eastern Uttar Pradesh by district, October 2013 – December 2022. Bars indicate 95% confidence intervals.

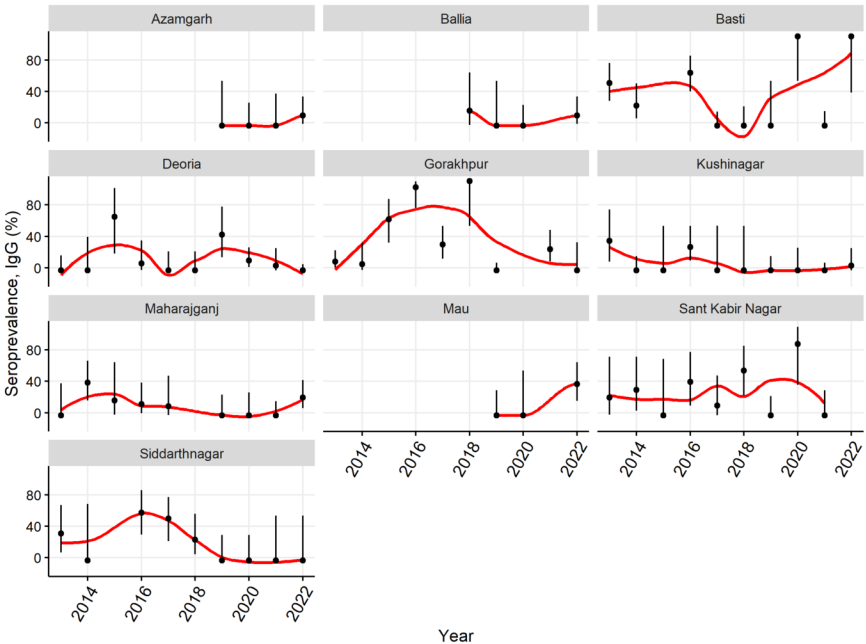


Figure S11 Annual seroprevalence of IgG for Japanese encephalitis virus in pigs aged 4-5 months in eastern

Uttar Pradesh by district, February 2013 – December 2022. Red line = loess smoothed seroprevalence.

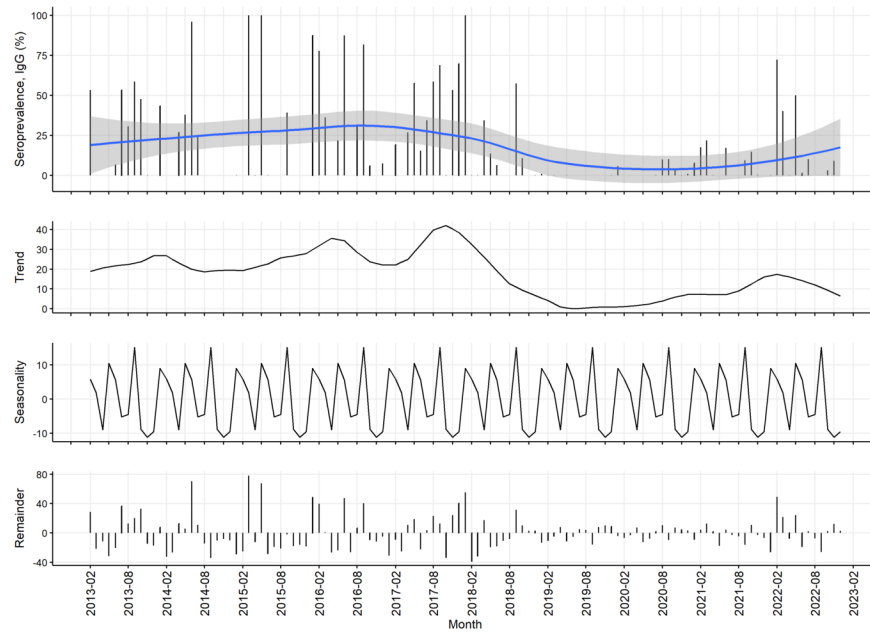


Figure S12 Time series and decomposition of monthly Japanese encephalitis virus (JEV) IgG seroprevalence in pigs aged 6-12 months in eastern Uttar Pradesh, India, February 2013 – December 2022.

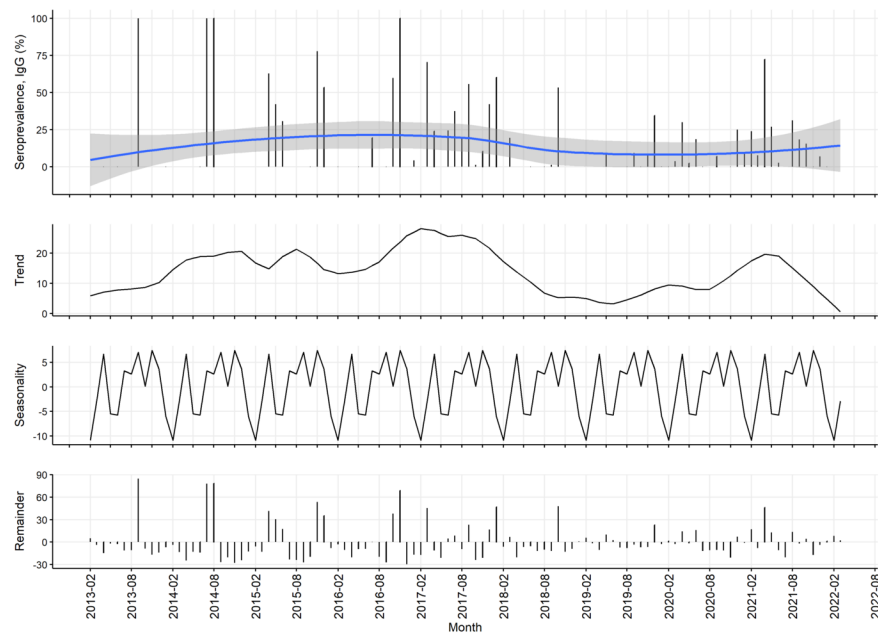


Figure S13 Time series and decomposition of monthly Japanese encephalitis virus (JEV) IgG seroprevalence in pigs >12 months in eastern Uttar Pradesh, India, February 2013 – December 2022.

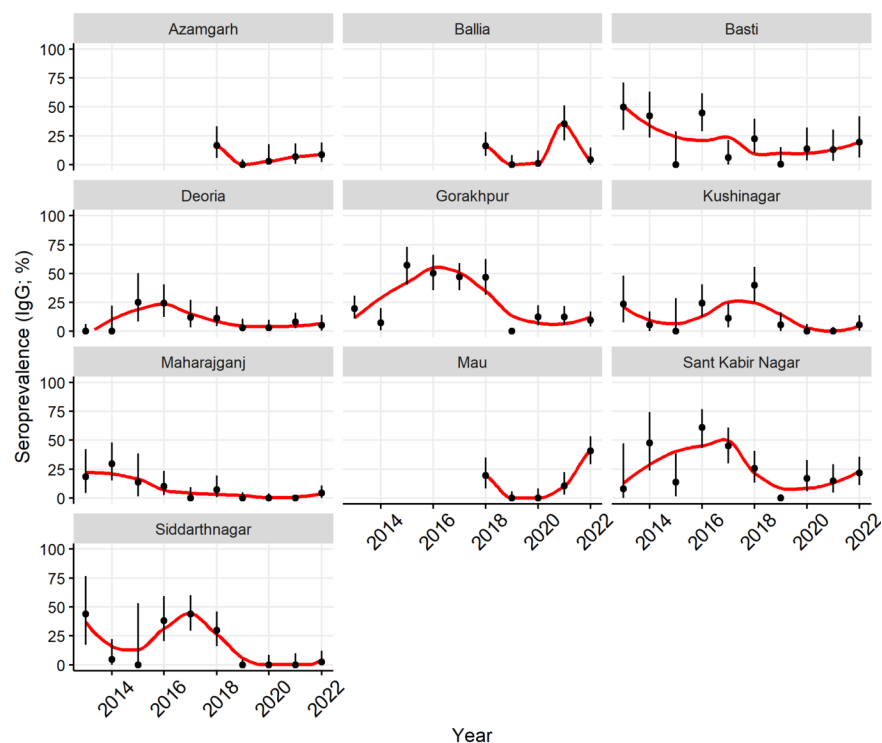


Figure S14 Annual seroprevalence of IgG for Japanese encephalitis virus in all age group pigs in eastern Uttar Pradesh by district, February 2013 – December 2022. Red line = loess smoothed seroprevalence.

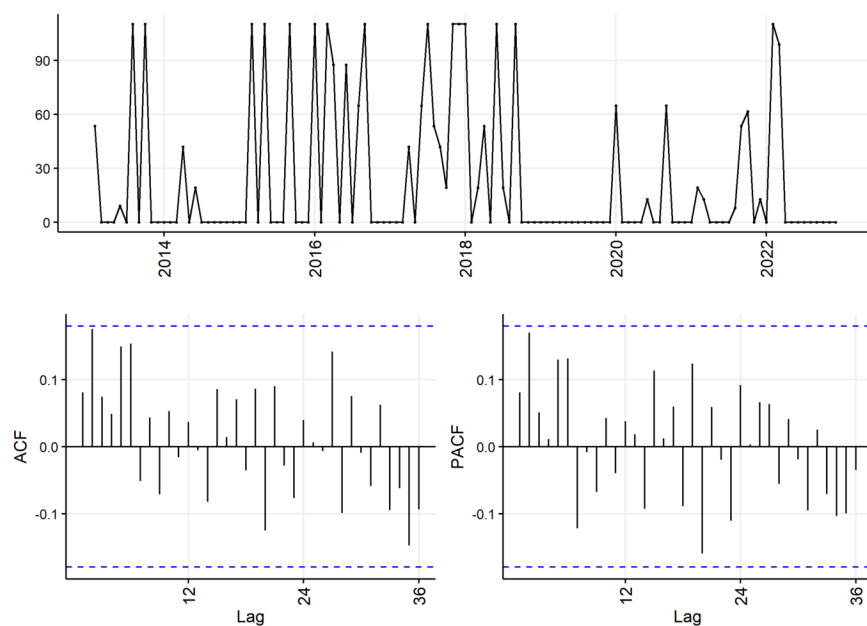


Figure S15 Timeseries (top), autocorrelation function (ACF) and partial autocorrelation function plots for

the monthly timeseries of IgG seroprevalence of Japanese encephalitis virus in pigs sampled in Gorakhpur district, Uttar Pradesh, February 2013 – December 2022.

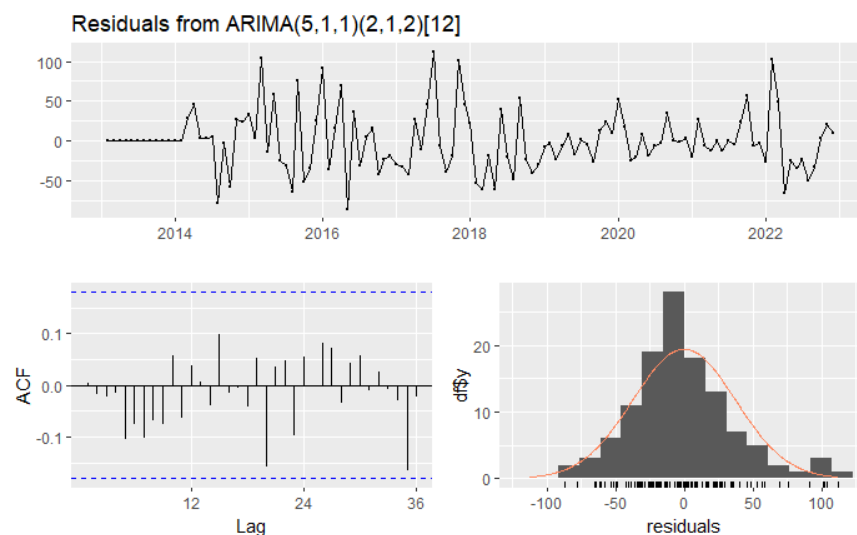


Figure S16 Residuals plots for ARIMA model of IgG seroprevalence of Japanese encephalitis virus in pigs sampled in Gorakhpur district, Uttar Pradesh, February 2013 – December 2022. Residuals $Q^* = 14.276$, $df = 14$, $p\text{-value} = 0.43$.

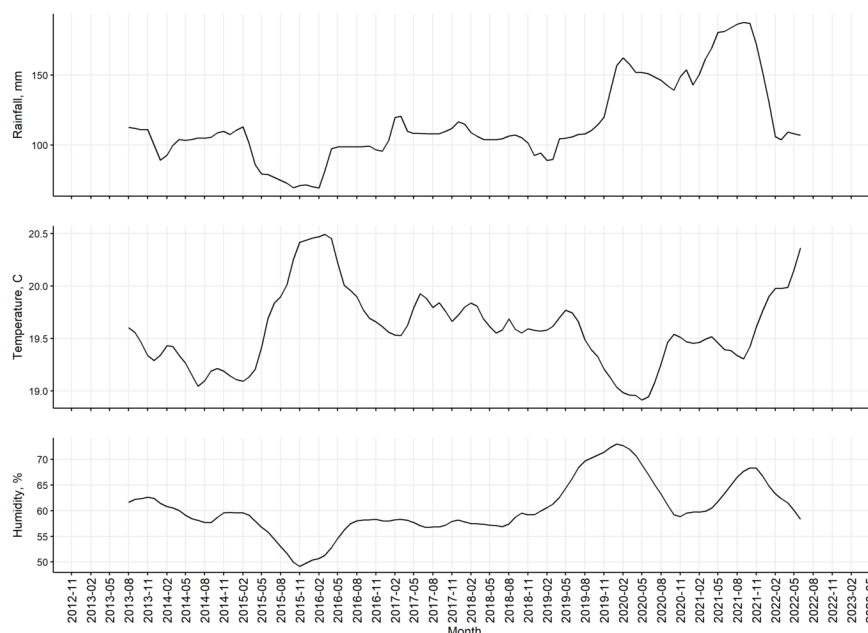


Figure S17 Trends of monthly total rainfall, mean minimum temperature and mean relative humidity, August 2013 – August 2022, from Gorakhpur Weather Station, Uttar Pradesh, India.

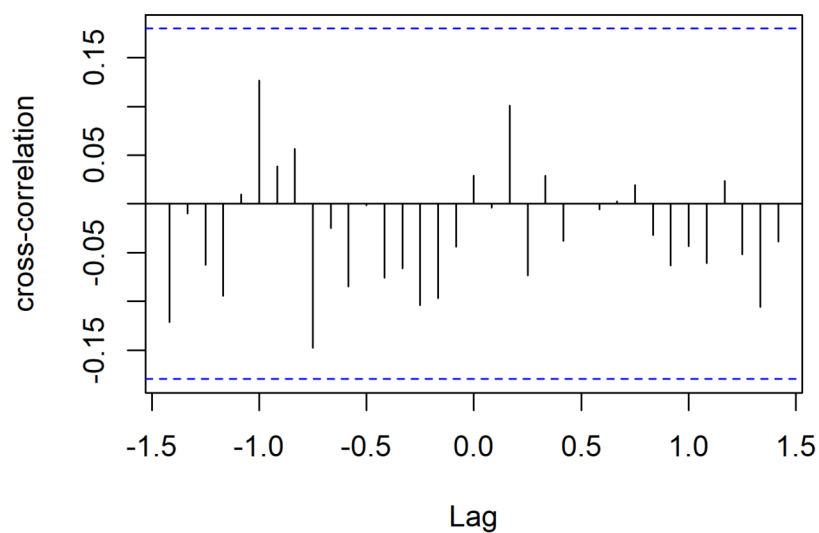


Figure S18 Cross-correlation function plot of monthly total rainfall and IgG seroprevalence of Japanese encephalitis virus in pigs sampled in Gorakhpur district, Uttar Pradesh, February 2013 – December 2022.

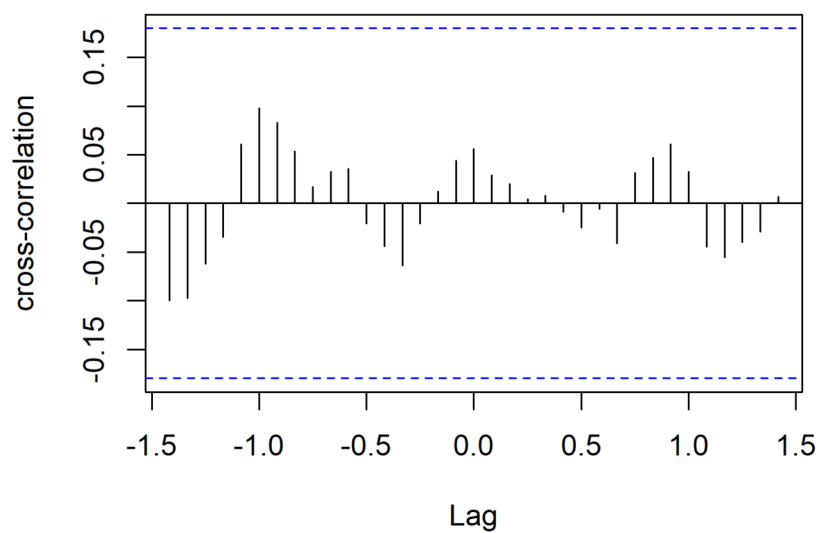


Figure S19 Cross-correlation function plot of mean minimum temperature and IgG seroprevalence of

Japanese encephalitis virus in pigs sampled in Gorakhpur district, Uttar Pradesh, February 2013 – December 2022.

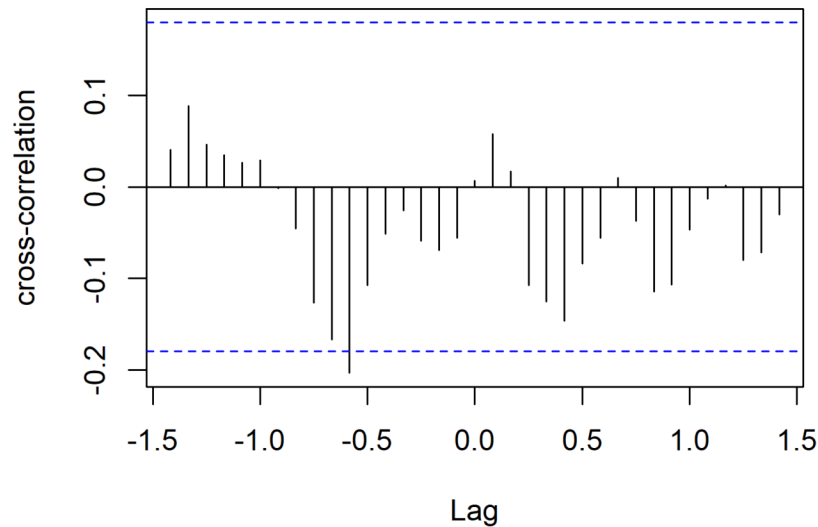


Figure S20 Cross-correlation function plot of mean relative humidity and IgG seroprevalence of Japanese encephalitis virus in pigs sampled in Gorakhpur district, Uttar Pradesh, February 2013 – December 2022.

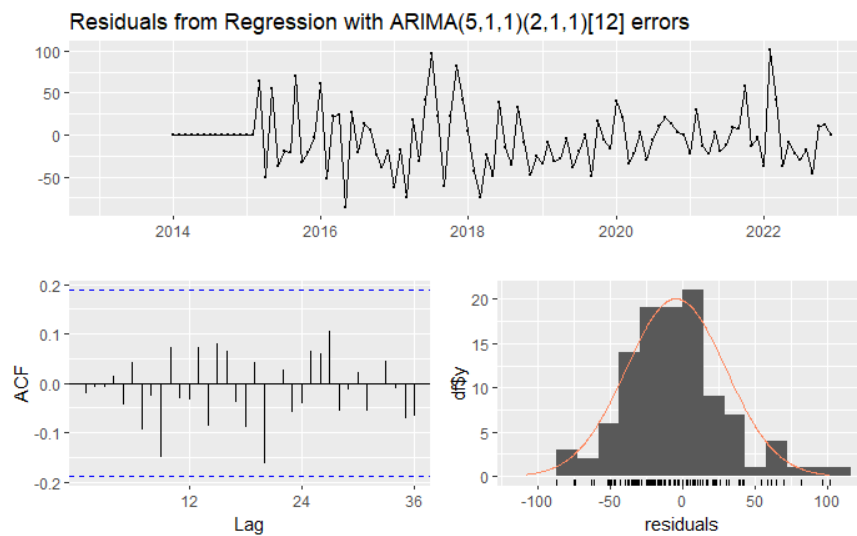


Figure S21 Residuals plots for ARIMA model including mean relative humidity of lag 12 months, of IgG seroprevalence of Japanese encephalitis virus in pigs sampled in Gorakhpur district, Uttar Pradesh, February 2013 – December 2022. Residuals $Q^* = 14.1$, $df = 15$, $P = 0.52..$